

REMARKS

Claims 1-8 are pending in the above-identified application. Support for the change to claim 1 is found in paragraph [0030] at page 16 of the specification. Support for new claims 3-8 is found in paragraphs [0016], [0028], [0034] and [0035].

Issues Under 35 U.S.C. 102(b) and 103(a)

Claims 1 and 2 have been rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ichikawa '883 (EP 1 068 883). This rejection is traversed for the following reasons.

Present Invention and Its Advantages

The golf ball of the present invention includes the following significant features: [i] a golf ball structure which includes at least a core and a cover; [ii] a cover formed from a material having a value of the maximum load of 1.5 to 3.0 kN at an impact energy of 47.3 J in penetration and impact fatigue tests; and [iii] a golf ball cover formed from one of the materials listed at the end of claim 1, such as a polyurethane-based thermoplastic elastomer. The technical meaning of limiting the value of the maximum load at an impact energy of 47.3 J in penetration and impact fatigue tests in the present invention is described in

paragraphs [0002] to [0007] and [0013], particularly paragraph [0013] of the specification of the present application. The test method is described in paragraph [0055] and Figure 1. The value of the maximum load at an impact energy of 47.3 J in penetration and impact fatigue tests is a significant feature of the present invention.

As noted in the specification at paragraph [0013], the present inventors have studied a mode of the actual scuff phenomenon. As a result, it is considered that the scuff occurs in a penetration mode, and they noticed penetration and impact fatigue properties. Therefore, it was apparent that a value of the maximum load in penetration and impact fatigue tests closely correlate with scuff resistance. There have been golf balls, of which the cover is designed in view of a formulation and wear of the cover material, in the prior art as described above. It is possible in some degree to improve the scuff resistance by using the cover material of Japanese Patent Kokai publication No. 102628/2000, or by using the cover material of Japanese Patent Kokai publication No. 299965/2001 to reduce the wear amount. However, there were golf balls, of which the scuff resistance is not sufficiently obtained, among the golf balls obtained by using the above cover materials, and there was no index based on the scuff phenomenon. Therefore, in the present invention, it was found that the golf ball having excellent

scuff resistance was obtained by adjusting the value of the maximum load at an impact energy of 47.3 J in penetration and impact fatigue tests of the cover to a specified range. In the present invention, penetration mode, which is not tensile mode, is selected in impact test, because it is considered that the penetration mode is similar to impact phenomenon when hit the golf ball by an iron club.

The present invention exhibits unexpected, advantageous properties as evidenced by the comparative test results shown in Tables 1-7 at pages 22-32 of the specification. Note that Example Nos. 1-9 (present invention) all exhibit significantly and advantageously improved "scuff resistance" as compared to Comparative Example Nos. 1-8, even though the Comparative Examples employ the same core structures/compositions and similar cover compositions having the same hardness and thickness properties. Consequently, unless the maximum load of at least 1.5 kN is satisfied, the advantageous properties of the golf ball of the present invention cannot be obtained.

#### Distinctions Between Present Invention Ichikawa '883

Ichikawa '883 discloses a golf ball having a core **1** which is enclosed by one or more layers **2, 3**. At least one of the enclosure

layers 2, 3 is formed of a rubber composition which includes as a base rubber cis-1,4-polybutadiene.

Ichikawa '883 fails to disclose or suggest the maximum load range of 1.5 - 3.0 kN as in the golf ball of the present invention. Ichikawa '883 further fails to disclose a golf ball having a cover formed from the materials listed at the end of present claim 1. Ichikawa '883 additionally fails to recognize the advantages achieved by the present invention with respect to advantageously improved scuff resistance as evidenced by the comparative test results discussed above. Therefore, significant patentable distinctions exist between the present invention and Ichikawa '883. Further, even if prima facie obviousness has been properly alleged, such obviousness has been rebutted by the comparative test results discussed above.

It is submitted for the reasons stated above that the present claims define patentable subject matter such that this application should now be placed condition for allowance.

If any questions arise regarding the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

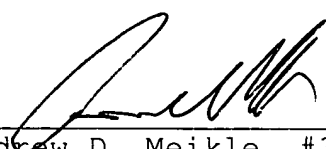
Appl. No. 10/802,839

overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By

  
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